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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,032	09/11/2003	Christophe Arbogast	57637/1185	6754

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KRAMER LEVIN NAFTALIS & FRANKEL LLP
INTELLECTUAL PROPERTY DEPARTMENT
1177 AVENUE OF THE AMERICAS
NEW YORK, NY 10036

EXAMINER	
JONES, DAMERON LEVEST	
ART UNIT	**PAPER NUMBER**
1618	

DATE MAILED: 08/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/661,032	ARBOGAST ET AL.	
	Examiner	Art Unit	
	D. L. Jones	1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *6/22/05; 1/10/05; & 7/13/05*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *66-75,111 and 113-133* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *66-75,111 and 113-133* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/13/05 & 1/10/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

ACKNOWLEDGMENTS

1. The Examiner acknowledges receipt of the preliminary amendments filed 3/24/04 and 6/7/04 wherein the specification was amended. In addition, the Examiner acknowledges receipt of the amendment filed 6/22/05 wherein claims 1-65, 76-110, and 112 are canceled; claims 66-75 and 111 are amended; and claims 113-133 are new.

Note: Claims 66-75, 111, and 113-133 are pending.

APPLICANT'S INVENTION

2. The claims are directed to dimers of independent claims 66 and 67 and methods of use thereof.

APPLICANT'S ELECTION

3. Applicant's election of Group 29 with traverse filed 6/22/05 is acknowledged. The traversal is on the basis that Groups 28 and 29 should be combined because the structures are similar. Applicant's argument is found persuasive and thus the pending claims will be examined which are directed to D32 and D33 and uses thereof. In addition, it is noted that Applicant is of the opinion that the restriction is improper because there was not explanation what a number of the groups are distinct for one another and why examining the full scope of the instant invention is a serious burden on the Examiner. Applicant's arguments in regards to examining the full scope of the instant invention are found non-persuasive for the reasons below.

First, it is noted that the inventions are distinct because they are not structurally similar. Thus, prior art that anticipates or renders obvious one group would neither anticipate nor render obvious another group. Hence, a ***separate*** search of each group is necessary to determine the patentability of each group. Secondly, Applicant is entitled to one invention per patent. Thus, the examination of multiple inventions in a single patent application is a burden on the Examiner, especially when structurally distinct species that are able to support individual patents, as in the instant invention, are disclosed. Thus, the restriction is deemed proper and is made FINAL.

DOUBLE PATENTING REJECTIONS

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claim 67 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 3 and 57 of copending Application No. 10/379,287. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are directed to a D32 dimer. The claims differ in that the claims of 10/379,287 are directed to a composition comprising the dimer and the instant invention is directed to a *compound comprising* a dimer which is interpreted as a *composition* comprising the dimer since the term 'comprising' allows for other components to be present. Hence, both claims are directed to compositions comprising the dimer.

1.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

112 REJECTIONS

First Paragraph Rejection

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 74 and 75 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There are several guidelines when determining if the specification of an application allows the skilled artisan to practice the invention without undue experimentation. The factors to be considered in determining what constitutes undue experimentation were affirmed by the court in *In re Wands* (8 USPQ2d 1400 (CAFC 1986)). These factors are (1) nature of the invention; (2) state of the prior art; (3) level of one of ordinary skill in the art; (4) level of predictability in the art; (5) amount of direction and guidance provided by the inventor; (6) existence of working examples; (7) breadth of claims; and (8) quantity of experimentation needed to make or use the invention based on the content of the disclosure.

(1) Nature of the invention

The claims are directed to the compounds (D32 and D33) and uses thereof.

(2) State of the prior art

The references of record do not indicate which specific diseases or class of diseases are useful with the claimed compounds. Instead, Applicant has cited US Patent No. 6,025,331 as having diseases that may be useful with the instant invention.

(3) Level of one of ordinary skill in the art

The level of one of ordinary skill in the art is high. The claims encompass a vast number of possible diseases. Applicant's specification does not enable the public to use the compounds of the claimed invention in such a vast number of diseases.

(4) Level of predictability in the art

The art pertaining to diseases is highly unpredictable. Determining the various types of compounds or class of compounds that are compatible with the various diseases requires various experimental procedures and without guidance that is applicable to all diseases, there would be little predictability in performing the claimed invention.

(5) Amount of direction and guidance provided by the inventor

The claims encompass a vast number of diseases. Applicant's limited guidance does not enable the public to use the compounds of the instant invention with such a numerous amount of diseases. There is no directional guidance for the *specific* diseases that are compatible with the compounds of the instant invention. While Applicant discloses that the compounds may be used for diseases associated with angiogenesis and refers to other diseases (i.e., solid tumors; sarcomas and carcinomas; fibrosarcoma; myxosarcoma; liposarcoma; chondrosarcoma; osteogenic sarcoma; chordoma; angiosarcoma; endotheliosarcoma; lymphangiosarcoma; lymphangioendotheliosarcoma; synovioma; mesothelioma; Ewing's tumor; leiomyosarcoma; rhabdomyosarcoma; colon carcinoma; pancreatic cancer; breast cancer; ovarian cancer; prostate cancer; squamous cell carcinoma; basal cell carcinoma; adenocarcinoma; sweat gland carcinoma; sebaceous gland carcinoma;

papillary carcinoma; papillary adenocarcinomas; papillary adenocarcinomas; cystadenocarcinoma; medullary carcinoma; bronchogenic carcinoma; renal cell carcinoma; hepatoma; bile duct carcinoma; choriocarcinoma; seminoma; embryonal carcinoma; Wilms' tumor; cervical cancer; testicular tumor; lung carcinoma; small cell lung carcinoma; bladder carcinoma; epithelial carcinoma; glioma; astrocytoma; medulloblastoma; craniopharyngioma; ependymoma; Kaposi's sarcoma; pinealoma; hemangioblastoma; acoustic neuroma; acoustic neuroma; oligodendroglioma; menangioma; melanoma; neuroblastoma; and retinoblastoma) disclosed as disclosed in US Patent No. 6,025,331. However, Applicant does not disclose any examples or present any data indicating that the compounds of the claimed invention actually work in the desired methods, but hypothesizes that the compounds would be useful with a multitude of diseases. Hence, there is no enablement for all possible permutations and combinations of the compounds and diseases as set forth in the instant invention.

(6) Existence of working examples

The claims encompass a multitude of possible diseases. Applicant's specification does not disclose any working examples for which the compounds of the instant invention have been used to diagnosis/treat any disease.

(7) Breadth of claims

The claims are extremely broad due to the vast number of possible diseases known to exist which that may be used in combination with the compounds of the instant invention.

(8) Quantity of experimentation needed to make or use the invention based on the content of the disclosure

The specification does not enable any person skilled in the art to which it pertains to make or use the invention commensurate in scope with the claims. In particular, the specification fails to enable the skilled artisan to practice the invention without undue experimentation by diagnosing/treating a disease using the compounds of the instant invention. Furthermore, based on the unpredictable nature of the invention, the state of the prior art, and the extreme breadth of the claims, one skilled in the art could not perform the claimed invention without undue experimentation since the specification does not clearly set forth diseases which are treatable of may be diagnosed using the compounds of the instant invention.

Second Paragraph Rejections

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 66-75, 111, and 113-133 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 66, 67, 69, 122, 124, 125, and 127-129 are ambiguous because the *specific* claims do not contain a period. Thus, it is unclear whether Applicant intended to add more text or not. Furthermore, it should be noted that all claims (claims 68-75

and 113-133) that depend on independent claims 66 and 67 are also ambiguous because it is unclear because the independent claims are indefinite.

Claim 66: The claim as written is confusing because the structure is labeled as D32, but the structure is that of D33. Applicant is respectfully requested to make the appropriate correction.

Claim 67: Did Applicant intend to insert 'D32' to identify the structure? In particular, Applicant has identified the structure of claim 66 as D32 which is incorrect.

Claim 71, line 5: The phrase 'imaging the compound after administering to the patient' is ambiguous because it is not the compound that is imaged, but the patient. Did Applicant intend to write 'imaging the patient after administration of the compound'?

Claim 111: For clarity of the claim, Applicant is respectfully requested to incorporate the structure into claim 111. In particular, the claim is ambiguous because what Applicant has identified as D32 in the claims (i.e., independent claim 66) is inconsistent with that of the specification. Hence, it I unclear which structure is actually D32 and D33. Furthermore, Applicant is respectfully requested to incorporate the method steps into the claim instead of referring to the steps of Example 9.

Claims 119 and 132: The claim as written is ambiguous because of the phrase 'derivative thereof'. In particular, it is unclear which portion of the parent structure remains in the derivative. Thus, it is unclear what chelator is being claimed.

Claim 123, lines 10-11: The claim is ambiguous because of the phrase 'a homopolyamide or heteropolyamine derived from synthetic or naturally occurring amino

acid'. In particular, it is unclear what homopolyamides and heteropolyamines Applicant is claiming that are compatible with the instant invention.

Claim 133: The claim as written is ambiguous because of the terms 'bioactive agent', 'a cytotoxic agent', 'a drug', 'a chemotherapeutic agent', or 'a radiotherapeutic agent'. In particular, it is unclear what specific agents Applicant is claiming that are compatible with the instant invention.

SPECIFICATION

10. The disclosure is objected to because of the following informalities: Applicant is respectfully requested to fill in the missing text in the specification (for example, page 25, page 214, etc.). Appropriate correction is required.

COMMENTS/NOTES

11. It should be noted that no prior art has been cited against the claims of the instant invention. However, Applicant MUST address and overcome the double patenting rejection and 112 rejections above. In particular, the claims are distinguished over the prior art of record because the prior art neither anticipates nor renders obvious compounds having the structure as that of independent claims 66 and 67 or the synthesis of the multimeric compounds comprising D32 and D33 as set forth in Example 9.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. L. Jones whose telephone number is (571) 272-0617. The examiner can normally be reached on Mon.-Fri., 6:45 a.m. - 3:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. L. Jones
Primary Examiner
Art Unit 1618

July 28, 2005